

ABSTRACT OF THE DISCLOSURE

**POWER CONTROLLER SYSTEM AND METHOD**

A power controller provides a distributed generation power networking system in which bi-directional power converters are used with a common DC bus for permitting compatibility between various energy components. Each power converter operates essentially as a customized bi-directional switching converter configured, under the control of the power controller, to provide an interface for a specific energy component to the DC bus. The power controller controls the way in which each energy component, at any moment, will sink or source power, and the manner in which the DC bus is regulated. In this way, various energy components can be used to supply, store and/or use power in an efficient manner. The various energy components include energy sources, loads, storage devices and combinations thereof.